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MW

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|------------------------|---------------------|------------------|
| 09/954,597 | 09/12/2001 | Orville Phillip Frazee | 469 | 8276 |
| 28782 | 7590 | 01/29/2004 | EXAMINER | |
| <u>WILLIAM E HEIN</u> PO BOX 335 LOVELAND, CO 80539-0335 | | | TAMAI, KARL I | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2834 | |

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|-------------------------|----|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/954,597 | FRAZEE, ORVILLE PHILLIP | |
| | Examiner | Art Unit | MW |
| | Tamai IE Karl | 2834 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11/17/2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5 and 7-11 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other:

DETAILED ACTION***Specification***

1. The amended title "CONTROLLABLE DISK TYPE MOTOR WITH EQUAL NUMBER OF STATOR AND ROTOR MAGNETIC POLES" has been entered into the specification. The requirement of a new title is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter (US 5,179,307) and Shtipelman (US 4,922,145). Porter teaches a motor with 10 C-shaped, iron, electromagnets on the stator and 10 permanent magnets on the rotor (fig. 3, col. 3, line 43). Porter teaches a circuit to control the speed of energizing the coils to vary the speed of the rotor. Porter teaches every aspect of the invention except a non-magnetic housing. Shtipelman teaches the housing being non-magnetic. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Porter with a non-magnetic housing because Shtipelman teaches aluminum as the preferred material for the housing, and because a non-magnetic housing would reduce flux losses.

4. Claims 7-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter (US 5,179,307) and Shtipelman (US 4,922,145), in further view of Patarchi (W099/27635). Porter and Shtipelman teach every aspect of the invention except a plurality of rotors and stators. Patarchi teaches a multiple rotor and stators (figure 6) to provide increased efficiency for increased motor scale. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Porter and Shtipelman with multiple rotors and stators to increase efficiency, as taught by Patarchi.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter (US 5,179,307) and Shtipelman (US 4,922,145), in further view of Lohr (US 3,566,165). Porter and Shtipelman teach every aspect of the invention except an output flange on the shaft. Lohr teaches an output flange 20 for driving a wheel. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Porter and Shtipelman with an output flange of Lohr to drive a wheel.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter, Shtipelman, and Patarchi, in further view of Lohr. Porter, Shtipelman, and Patarchi teach every aspect of the invention except an output flange on the shaft. Lohr teaches an output flange 20. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Porter, Shtipelman, and Patarchi with an output flange of Lohr to drive a wheel.

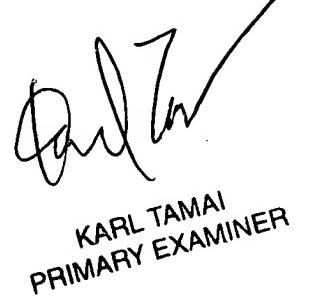
Response to Arguments

7. Applicant's arguments with respect to claims 1-5 and 7-11 have been considered but are moot in view of the new grounds of rejection.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066 until February 1, 2004, or at (571) 272-2036 after February 2, 2004.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
January 16, 2004



KARL TAMAI
PRIMARY EXAMINER